

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A process for preparing mechanical pulp, comprising
 - chipping the raw wood material,
 - pre-treating the chips with an enzyme that is capable of disintegrating the structural parts of the wood, after which
 - mechanical pulp is prepared from the chips by refining, **characterized** in that
 - the enzymatic treatment is carried out by compressing the chips and bringing the compressed chips in a liquid phase into contact with an enzyme preparation containing an effective amount of both cellobiohydrolase and endoglucanase.
2. (original): A method according to Claim 1, **characterized** in that an enzyme preparation is used, containing cellobiohydrolases and endoglucanases in a weight ratio of the proteins of 20:1 – 1:20, preferably in a weight ratio of 9:1 – 1:9.
3. (currently amended): A method according to Claim 1 ~~or 2~~, **characterized** in that an enzyme preparation is used, containing cellobiohydrolases and endoglucanases in a weight ratio of the proteins of 5:1 – 1:5, preferably in a weight ratio of 3:1 – 1:3.

4. (currently amended): A method according to claim 1 ~~any of the preceding claims~~,
characterized in that an enzyme preparation is used, containing 2 – 60% by weight, preferably
20 – 55% by weight of endoglucanases.

5. (currently amended): A method according to claim 1 ~~any of the preceding claims~~,
characterized in that the enzyme preparation is produced by any production strain that is used
industrially.

6. (currently amended): A method according to claim 1 ~~any of the preceding claims~~,
characterized in that the enzyme preparation is produced by a strain belonging to a family that
is selected
from the following group: *Trichoderma*, *Aspergillus*, *Penicillium*, *Humicola*, *Phanerochaete*,
Streptomyces, and *Bacillus*.

7. (currently amended): A method according to claim 1 ~~any of the preceding claims~~,
characterized in that the enzyme preparation is used in an amount of 0.1 – 7mg of protein per g
of chips, preferably 3 – 6mg of protein per g of chips (dry matter).

8. (currently amended): A method according to claim 1 ~~any of the preceding claims~~,
characterized in that the pulp is refined to obtain a drainability of at least 100ml CSF,
preferably at least about 80ml CSF.

9. (currently amended): A method according to claim 1 ~~any of the preceding claims~~,
characterized in that the chips are compressed by at least 10%.

10. (original): A method according to Claim 9, **characterized** in that the chips are compressed
using a compression ratio of 1:2 — 1:10.

11. (currently amended): A method according to claim 1 ~~any of the preceding claims~~,
characterized in that the average chip size of the chips that are subjected to the compression
treatment is about 15 — 25 mm.

12. (currently amended): A method according to claim 1 ~~any of the preceding claims~~,
characterized in that the compression treatment is carried out in a screw clamp or a hydraulic
press.

13. (currently amended): A method according to claim 1 ~~any of the preceding claims~~,
characterized in that the enzyme preparation is allowed to act on the chips for at least 1 minute,
preferably about 5 — 100 min before the refiner mechanical pulp is prepared.

14. (currently amended): A method according to claim 1 ~~any of the preceding claims~~,
characterized in that the chips are steamed before the compression treatment.

15. (currently amended): A method according to claim 1 ~~any of the preceding claims~~,
characterized in that the mechanical pulp is prepared by the TMP or the RMP method.

16. (currently amended): The use of the method according to claim 1 ~~any of the preceding claims~~
for preparing mechanical pulp that is used for paper pulp.

17. (original): A method of reducing the energy consumption of mechanical pulping processes
that are based on the refinement of chips, **characterized** in that, before refining, the chips are
treated with an enzyme preparation, which contains cellobiohydrolase and endoglucanase
enzymes in a ratio of 20:1 — 1:20 and which is absorbed into the chips by a mechanical
compression of the chips and by bringing the compressed chips into contact with the enzyme
preparation in a liquid phase.

18. (original): A method according to Claim 17, **characterized** in that the chips are refined to
obtain a drainability level of < 100m1 CSF, preferably < 80m1 CSF.